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(21) International Application Number: PCT/US93/11541 (22) International Filing Date: 30 November 1993 (30.11.93) (30) Priority Data: 983,367 30 November 1992 (30.11.92) US (71) Applicants: MASSACHUSETTS INSTITUTE OF TECHNOLOGY [US/US]; 77 Massachusetts Avenue, Cambridge, MA 02139 (US). UNIVERSITY OF IOWA RESEARCH FOUNDATION [US/US]; 214 Technology Innovation Center, Oakdale Campus, Iowa City, IA 52242 (US). (72) Inventors: SASISEKHARAN, Ramnath; 118 Ridge Street, Arlington, MA 02174 (US). LOHSE, Daniel, L.; 4441 Old College Road, No. 5204, Bryan, TX 77801 (US). COONEY, Charles, L.; 35 Chestnut Place, Brookline, MA 02146 (US). LINHARDT, Robert, J.; 1422 Plum Street, Iowa City, IA 52240 (US). LANGER, Robert, S.; 77 Lombard Street, Newton, MA 02158 (US). (74) Agents: PABST, Patrea, L. et al.; Kilpatrick & Cody, 1100 Peachtree Street, Suite 2800, Atlanta, GA 30309-4530 (US).		(81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: PURIFICATION, COMPOSITION AND SPECIFICITY OF HEPARINASE I, II, AND III FROM <i>FLAVOBACTERIUM HEPARINUM</i>		
(57) Abstract A single, reproducible scheme to simultaneously purify all three of the heparin lyases from <i>F. heparinum</i> to apparent homogeneity is disclosed herein. The kinetic properties of the heparin lyases have been determined as well as the conditions to optimize their activity and stability. Monoclonal antibodies to the three heparinases are also described and are useful for detection, isolation and characterization of the heparinases.		